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## Design-led Approach to Social Innovation

### Abstract

The current approaches to the organization and management are not sufficient to fully describe and explain the nature of and processes underlying social innovations. Being understood as new ideas working to respond unmet social problems and needs to essentially improve people's lives, they involve changing patterns of social practices, relationships and interactions. They are at the same time the cause and the most important means of the social change. Thus, the main goal of this paper is to present, describe and analyze a design-led approach to social innovation. It is relatively new approach, which derives from design sciences and is understood both as a science and practice within organization and management sciences. It delivers a new scientific framework for the description, explanation and design of social innovation processes and their results.

### Key words:

social innovation, management as a design science, design management, design thinking, design-led approach.

## Introduction

The growing interest in human and social dimensions of changes, including technological changes, and the search for innovative solutions to important social problems should be an essential premise for intensified research in the field. As some authors note, designers have traditionally been focused on enhancing the look and function-

ality of products, then design was adapted by management to develop innovation and new business models. Recently, design is increasingly used to tackle with more complex social problems [Brown, Wyatt 2010; Bucolo, Matthews 2010; Manzini 2014].

Design-led approach delivers a new scientific framework for the description, explanation and design of these processes and their results [Kelley, Littman 2001; Huff et al. 2006; Gasparski 2007; Bucolo, Matthews 2010; Kimbell 2011; Bucolo, Wrigley 2012; Sobota, Szewczykowski 2014; Brown 2016].

#### *Goals and focus*

The current approaches to the organization and management are not sufficient to fully describe and explain the processes underlying social innovation. Thus, new ways of solving the problems and scientific approaches to their description and analysis are needed. The purpose of the paper is to present, describe and analyze the relatively new approach to social innovation, which derives from design and is understood both as a science and practice within organization and management sciences. The analysis of literature on social innovation and different approaches to social innovation indicates the lack of a theoretical basis strong enough to fully describe and explain this extremely dynamic area of human activity. Thus, this paper presents the basis of a conceptual model to allow to explore the value of adopting a design led approach to social innovation.

#### *Materials and methods*

The discussion undertaken in the paper is theoretical and methodological, and primarily based on the method of the analysis and criticism of literature on social innovation, design-thinking and design-led approach, especially placed in the area of management sciences. The research method used to solve the scientific problem is mainly deduction, which referred to the critical literature study has allowed to achieve the research goals. However, the applied method comprised a more complex reasoning process that also included elements of analysis, abstraction, synthesis and generalization of existing research results and findings. The reasoning process additionally includes elements of analogy (especially when trying to adapt the design-led approach to social innovation). In the process of reasoning different ways of reasoning were used at particular stages and in order to achieve individual partial research results. Thus, detailed information on the individual parts of this process is presented in Table 1 in the next paragraph, where they are related to the partial research results achieved with their help.

The main axis of the paper are methodological considerations in the sense S. Nowak [2012] gives to this term. As he claimed "description and analysis of the rules of conduct, as well as description and analysis of patterns of products of various re-

search activities is the task of science called the methodology of science" [Nowak 2012, p. 23]. Using the term "approach" in relation to design-led innovation is to indicate some rules of conduct associated with effective social innovation practices.

## Theoretical background

The reasoning process carried out for this paper was preceded by an extensive literature review. A synthetic review of the literature, which contains approaches that are most appropriate for the purpose of this study, is presented here. The theoretical starting point to present the results of the reasoning contains social innovation concept and design led approach to innovation based largely on design thinking.

Many authors have written about the nature and importance of, and different processes underlying social innovation [Mumford 2002; Mulgan et al. 2007; Pol, Ville 2009; Bergman 2010; Caulier-Grice et al. 2012; Olejniczuk-Merta 2013; Cajiaba-Santana 2014; Manzini 2014; Kwaśnicki 2015]. The review of the literature presented here starts with the description of the nature of social innovation and its significant characteristics. Then the design-led approach to innovation is presented and discussed. The number of studies on this subject has been increasing in recent years [Aken 2004; Verganti 2008; Holmström et al. 2009; Brown, Wyatt 2010; Bucolo, Matthews 2011; Dorst 2011; Bucolo, Wrigley 2012; Bason 2013].

### *Social innovation*

Innovations (including social innovations) undoubtedly change our lives and the world around us by introducing novel technologies, products, services, methods and tools, new patterns of practices, interactions and social relations, and even new structures, organizational forms and social institutions. J. Schumpeter already recognized innovation as a factor of development in 1912 [Schumpeter 1960; Olejniczuk-Merta 2013]. Since then, a number of authors have been continuing to contribute to both theory and practice on the field [Drucker 1992; Hippel 1988; Mulgan 2006; Hamel, Breen 2008; Steward et al. 2009; Olejniczuk-Merta 2013].

As G. Mulgan remarks, "much of what we now take for granted in social life began as radical innovation. A century ago, few believed that ordinary people could be trusted to drive cars at high speed, the idea of a national health service freely available was seen as absurdly utopian, the concept of "kindergarten" was still considered revolutionary, and only one country had given women the vote" [Mulgan 2006, p. 145].

One of the most succinct definition of innovation is formulated by F. Steward et al. as "successful exploitation of new ideas" [Steward et al. 2009, p. 7]. According to J.A. Schumpeter, innovations, however, are not minor changes that each unit can

carry out, adapting to the changes taking place in its environment and not going too far from the beaten path [Schumpeter 1960, pp. 128–129]. As some authors note, an innovation is not merely a new idea or invention, but must be put into practice [Schumpeter 1960; Mulgan et al. 2007; Bergman 2010; Kwaśnicki 2015]. According to F. Damanpour et al., “innovation is defined as the adoption of an idea of behaviour – whether pertaining to a device, system, process, policy, programme, product, or service – that is new to the adopting organization” [Damanpour et al. 1989, p. 588]. As G. Mulgan et al. say, “innovation is often given complex definitions. We prefer the simple one: ‘new ideas that work’. This differentiates innovation from improvement, which implies only incremental change; and from creativity and invention, which are vital to innovation but miss out the hard work of implementation and diffusion that makes promising ideas useful” [Mulgan et al. 2007, p. 8].

E. Pol and S. Ville note, that social innovation has come into common parlance in recent years. However, there is still a discussion about whether it is another buzz word, or a serious concept of significant scientific and practical value that identifies the type of innovation overlooked so far [Pol, Ville 2009]. Therefore, it seems necessary to embed social innovations on the wider and stronger epistemological and methodological ground.

Despite the growing interest in social innovations, which is pointed out by a number of authors [Mulgan 2007; Cajaiba-Santana 2014], the analysis of the scientific literature indicates a shortage of systematic theoretical and empirical research in the field on social innovation, supported by the dynamic development of the methodology of such research. There is still not even a relatively common view of what this type of innovation exactly is [Pol, Ville 2009; Caulier-Grice et al. 2012]. There is a certain class of phenomena that we cannot say whether they are included in this concept or not. The matter of the vastness and ambiguity of the concept of social innovation is noticed by many authors [Mulgan 2006; Caulier-Grice et al. 2012; Olejniczuk-Merta 2013; Cajaiba-Santana 2014].

In recent years, scientists have offered a number of definitions of social innovation, with varying degrees of specificity [Mumford 2002; Mulgan 2006; Bergman 2010; Olejniczuk-Merta 2013; Manzini 2014; Kwaśnicki 2015]. Many authors put the emphasis on the aspect of novel ideas responding to important social problems and needs that work to essentially improve people’s lives [Mumford 2002; Mulgan et al. 2007; Pol, Ville 2009; Caulier-Grice et al. 2012; Olejniczuk-Merta 2013; Kwaśnicki 2015].

According to some authors, this is not enough to precisely define the scope of the concept. They claim that certain forms of innovation cannot be included in social innovation category, although they are innovative ideas, are motivated by the desire to satisfy social needs and improve the quality of life. The scope of the concept

of social innovation needs to be narrowed to those changes that have a social, not technological character, and therefore concern primarily innovative patterns of social practices, relationships and interactions [Mumford 2002; Pol, Ville 2009; Howaldt, Schwarz 2010; Olejniczuk-Merta 2013; Cajaiba-Santana 2014; Manzini 2014; Kwaśnicki 2015]. These authors associate to some extent social innovations with social change. However, as J. Howaldt and M. Schwarz rightly notice, “the material difference between social change and social innovation rests in the latter being associated with planned and coordinated actions” [Howaldt, Schwarz 2010, p. 28].

Considering the nature of the relationship between social innovation and social change, it is worth recalling the observation of J. Howaldt and M. Schwarz. They claim that social innovations are components of social change and at the same time they are the most important cause of social change [Howaldt & Schwarz 2010, p. 28]. This is an extremely important observation if F. Phillips is not mistaken in claiming that social change has overtaken the speed of technological innovation [Phillips 2011]. It could mean that we had overestimated the role of science and technology as a vehicle of change to the detriment of social innovation [Cajaiba-Santana 2014] as a component and an important cause of social change [Howaldt, Schwarz 2010].

#### *Design-led approach*

Design as an approach to both management science and practice is not new [Simon 1969/1996; Shangraw et al. 1989; Romme 2003; Gasparski 2007; Verganti 2008; Holmström et al. 2009]. Its significance in management research and literature has been growing since H. Simon’s book entitled *The Science of the Artificial* [Simon 1969/1996]. According to R. Verganti, design has been gaining much attention among practitioners and scholars in the area of management and product development, business performance, and innovation management. These contributions are building a more grounded theoretical basis to the field of design management, which have helped us to better comprehend how design can be applied to get closer to users and to enhance innovative practices [Verganti 2008]. Thus, H. Simon and other authors rightly classify management into a group of design sciences [Simon 1969/1996; Gasparski 2007; Aken 2004; Huff et al. 2006].

Design, according to D. Braha and O. Maimon, “as problem solving is a natural and the most ubiquitous of human activities. Design begins with the acknowledgment of needs and dissatisfaction with the current state of affairs, and realization that some action must take place in order to solve the problem. In this way, scientists have been designing and acting as designers (sometimes unconsciously) throughout their lives. As such, it is of central concern to all disciplines within the artificial sciences (engineering in the broad sense)” [Braha, Maimon 1997, p. 146]. As such design is also

a logic of thinking and acting adequate to management as design science, including innovation problems. This is indicated by a number of authors [Simon 1969/1996; Gasparski 2007; Aken 2004; Huff et al. 2006; Bason 2010].

According to J. van Aken, “there are serious doubts about the actual relevance of present-day management theory as developed by the academic community [Aken 2004, p. 219]. The fundamental reason, why new theoretical approaches in management field are needed, is the problem of relevance to practice [Aken 2004; Huff et al. 2006]. Such arguments seem to be especially relevant also to innovation field, including social innovation. Thus, the proposition of design-led innovation referred to social innovation definitely require a deeper analysis and a broader description.

Some authors to some extent associate design-led approach with design thinking [Bucolo, Matthews 2010; Bucolo et al. 2012; Bucolo, Wrigley 2012]. Design thinking is a way of reasoning and acting in practice while designing solutions to specific problems (i.e. goods, services, practices, interaction, organizations, strategies) [Kimbell 2011; Kelley, Kelley 2015; Wszolek, Grech 2016]. Design-led approach adapts this way of reasoning as a conceptual framework to describe and explain the processes of design thinking as empirical phenomena and refers to an emerging research agenda [Bucolo, Wrigley 2012]. Because there is no need for such distinction in this paper, design thinking and design-led approach may be treated interchangeably and complementary.

According to T. Brown, design thinking is “a methodology that imbues the full spectrum of innovation activities with a human-centered design ethos” [Brown 2008, p. 86]. As S. Bucolo et al. claim, this kind of reasoning brings to an organization a different way of framing situations and possibilities, doing things, and tackling problems. It drives a cultural transformation of the way organizations undertake their businesses [Bucolo et al. 2012, p. 18].

Design led approach is a platform that links traditionally understood design with management and social sciences, and covers the gap between science and practice [Aken 2004; Huff et al. 2006; Bucolo, Wrigley 2012]. It can be defined as an approach, methodology or even philosophy of creative thinking and doing that originates from the work of the best designers, architects, engineers and is currently used to solve a much wider than traditionally range of problems [Dorst 2011; Johansson-Sköldberg et al. 2013; Sobota, Szweczykowski 2014; Brown 2016]. It is an effective approach to creative, innovative and systematic ways of solving open, complex and unambiguous management problems [Liedtka, Ogilvie 2011; Brown 2016] through triggering, intensifying and sustaining creativity in almost all areas of human life [Sobota, Szweczykowski 2014, p. 92]. Extending traditional business perspective with emotional,

empathic and other broadly human-centered qualities, design led approach redefines existing management approaches and methods of solving problems [Sanders, Stappers 2008; Bucolo, Wrigley 2012; Brown 2016].

## Results

In this paper, an inclusive, broad-based definition of design-led approach has been adopted. Design-led approach is an adaptation of the logic of thinking and the action that is typical in design to solve problems of contemporary management, especially those complex and still poorly recognized, and met by management methods, which require an innovative approach. Design is most often referred to as problem solving. Based on the acknowledgment of needs and dissatisfaction with the current state, it indicates and creates solutions [Braha, Maimon 1997; Kelley, Littmann 2001; Kimbell 2011].

The reasoning process leading to identification of design-led approach to social innovation was carried out. As the result of the process, the basic rules of design-led approach to social innovation have been identified. They constitute the basis for a conceptual framework of the presented approach. They contain on the main part of the research results synthesized in Table 1. The first two columns of the table include the individual rules and their description. The third column shows scientific methods that were used to formulate the rules.

**Table 1. Rules of design-led approach to social innovations**

Rules	Description	Scientific method
Innovation that are social in their means and in their ends	Social innovation is social in their ends delivering benefits to society and in their means by enhancing individual and social capacity to act. Relying on the inventiveness of citizens, civil society organizations and local communities, at the same time as the result of the innovation, they are enhancing their social ability and capacity to act [Howaldt, Schwarz 2010; Olejniczuk-Merta 2013; EU COM 2013; Cajaiba-Santana 2014].	Deduction methods related to the results of literature analysis on social innovation and different processes underlying it.

Rules	Description	Scientific method
Social innovations in design-led approach are led by vision about new product meanings and languages	A lot of research is concentrated on a specific approach to design usually called user-centered design [Verganti 2008; Kimbell 2011; Brown 2016]. In the design-led approach innovation processes hardly start from close observation of users' needs and requirements, but is based on a vision about possible new product meanings and languages diffusing in society [Verganti 2008; Bucolo, Matthews 2011].	Deduction methods related to the results of literature analysis on social innovation compared to design-led innovation qualities.
Social innovation as an open process	Innovation is not the result of artistic soul or a glimpse of genius, but systematic and consequent implementation of certain specific activities. Design-led approach includes relatively structured explorative and creative processes of creating solutions [Bason 2010; Buccolo et al. 2012; Sobota, Szewczykowski 2014; Brown 2016]. The processes are open in two aspects: (1) they are iterative and allows to use specific rules and tools quite freely, (2) they are open to various actors and sources of knowledge. Social innovation to a large degree is also based on open innovation and knowledge sharing paradigm [EU COM 2013; Kwaśnicki 2015].	Deduction methods related to the results of literature analysis on social innovation and comparing to the course of the innovation processes in design-led approach.
Social innovation as an outcome of work culture, especially based on cooperation	Work culture is an integral part of the methodology in design led approach [Sobota, Szewczykowski 2014; Kelley, Kelley 2015; Wszolek, Grech 2016]. First, the methodology is so flexible that it adapts every time to a particular process. Using a method understood as a strict procedure or an algorithm would not be effective. It is rather a collection of many logically connected knowledge, methods and tools from different disciplines [Braha, Maimon 1997]. Secondly, the design led approach requires some humanistic, exploratory and iterative capital of attitudes towards the practice of design and reality [Wszolek, Grech 2016; Brown 2016], which D. Kelley calls figuratively creative confidence [Kelley, Kelley 2015]. Some authors also underline the importance of cooperation and interdisciplinary teams in the field of social innovations. Changes in cooperation are at the same time the means and the ends of social innovations [Verganti 2008; Bucolo, Matthews 2013; Morawska-Jancelewicz 2016].	Deduction methods related to the results of literature analysis on social innovation compared to design-led innovation qualities.



Rules	Description	Scientific method
Design-led approach to social innovation as a conceptual framework	Design thinking delivers a logic of reasoning and acting in practice; while designing solutions to specific problems [Braha, Maimon 1997; Kimbell 2011; Brown, Wyatt 2010; Kelley, Kelley 2015; Wszolek, Grech 2016]. It is rather a framework of practice. As a methodology, it does not define strict rules of conduct, but only certain framework actions and rules of conduct as well as frame products of these activities. Design-led approach is an attempt to adapt this way of reasoning as a conceptual framework for description, explanation and design of design thinking practices applied to social innovation.	Deduction methods related to the results of literature analysis on design thinking and design-led approach.
Design as a driver of change in social innovation	Social innovation is often understood as a process of change [Mumford 2002; Pol, Ville 2009; Howaldt, Schwarz 2010; Olejniczuk-Merta 2013; Cajaiba-Santana 2014; Manzini 2014; Kwaśnicki 2015]. According to Simon, design is also the process of courses of action aimed at changing existing situations into preferred ones [Simon 1982]. Change is then the common part of design and social innovation.	Deduction methods related to the results of literature analysis on social innovation compared to design-led approach qualities (especially those common aspects of both concepts that are associated with change processes).

Source: own elaboration.

The rules presented above constitute the basis of conceptual framework of the presented approach, outline its nature and different processes underlying it. A more detailed description, explanation and attempt to assess the reasoning carried out will be presented in the discussion and conclusions section.

## Discussion and conclusions

The conclusions of the report developed by The Young Foundation encourage an increased interest in social innovation. Its authors point out how surprisingly little is still known about social innovation compared to the huge amount of research on innovation in science and business [Mulgan et al. 2007, p. 5]. According to G. Cajaiba-Santana, the interest in social issues in the areas of management, entrepreneurship and public management has also increased pace of research on social innovations. Nevertheless, the boundaries of social innovation have not yet been clearly defined, leaving space to contribute to both theory and practice in the field [Cajaiba-Santana 2014].

The in-depth analysis of the scientific literature provides an indication that not only there is still a lack of systematic theoretical and empirical research in the field

of social innovation, supported by the constant methodological development, but there is not even a common view on what this type of innovation basically is [Mulgan et al. 2007; Pol, Ville 2009; Caulier-Grice et al. 2012; Olejniczuk-Merta 2013; Cajaiba-Santana 2014; Kwaśnicki 2015]. As J. Caulier-Grice et al. note, although there is growing interest in social innovation among policymakers, foundations, researchers and academic institutions, a common definition of these innovations has not been yet developed [Caulier-Grice et al. 2012, p. 4]. E. Pol and S. Ville has observed that the term social innovation is used in various and overlapping ways in different disciplines: (1) as institutional change, (2) new ideas that work in meeting social goals, (3) an idea that works for the public good or (4) as a response to needs not taking on by the market [Pol, Ville 2009].

There are different approaches to social innovation in the literature [Bergman et al. 2010; Cajaiba-Santana 2014; Cronin 2014; Manzini 2014], but they do not allow to fully describe and explain the nature of and different processes underlying social innovation. Therefore, an attempt of research was made to adapt to social innovation the design-led innovation approach, which is already known in literature [Bason 2010; Bucolo, Matthews 2010; Bucolo, Wrigley 2012]. As the result the basic rules of the approach have been identified.

Social innovations being social in their ends and in their means have to not only deliver benefits to society, but also enhance social ability and capacity to act [Howaldt, Schwarz 2010; Olejniczuk-Merta 2013; Cajaiba-Santana 2014]. This fundamental difference from other types of innovation means that they also require a different approach, which is indicated by some authors [Pol, Ville 2009; Bergman et al. 2010; Cajaiba-Santana 2014]. This is also determined by the next two qualities of social innovation indicated in table 1: (1) social innovations are often led by vision about new product meanings and languages, (2) they are open processes.

A number of researchers assume that social innovation is a response to unmet social needs [Mumford 2002; Mulgan et al. 2007; Pol, Ville 2009; Caulier-Grice et al. 2012; Olejniczuk-Merta 2013; Manzini 2014; Kwaśnicki 2015]. This could mean, however, that the starting point is a close examination of users' needs and requirements, as some authors perceive the conventional design thinking approach [Kimbell 2011; Sobota, Szewczykowski 2014; Wszolek, Grech 2016]. However, design led approach to innovation is based on a vision about possible new product meanings and languages diffusing in society [Verganti 2008; Bucolo, Matthews 2011], which has turned out more relevant to social innovation. Using D.A. Schön's alternative epistemology of practice, Bucolo and Matthews note that design is a reflective conversation with the situation [Schön 1983; Bucolo, Matthews 2011]. Problems are actively framed by

designers, who are improving the situation in the consecutive moves [Bucolo, Matthews 2011, p. 2].

Design led approach to innovation bridges this gap defining the values of design to an organization. As S. Bucolo and J. Matthews note, design gives a different way of thinking, doing and tackling problems by creating novel solutions [Bucolo, Matthews 2011]. Thus, S. Bucolo and C. Matthews define it as “a process of creating a sustainable competitive advantage, by radically changing the customer value proposition” [Bucolo, Matthews 2011, p. 1]. Such processes to a large degree are based on open innovation paradigm. According to W. Kwaśnicki, this concept links ideas into a unified system, which is a specific business model. Ideas can come from inside the company as well as from outside its borders. The logic of open innovations is based on the abundance and diversity of knowledge that is needed to deliver value to an enterprise [Kwaśnicki 2015, p. 4]. This openness in the case of social innovation means knowledge-sharing and the inclusive ownership of knowledge [EU COM 2013].

The premises, stated above on the basis of literature, allowed to formulate the conclusion that a specific framework is needed to describe, explain and design social innovation. Adopting design thinking logic and design led approach as a framework of practice, it is rather a collection of logically connected knowledge, methods and tools from different disciplines than strict rules of conduct [Braha, Maimon 1997]. The integral part of such a methodology is work culture [Sobota, Szewczykowski 2014; Kelley, Kelley 2015; Wszolek, Grech 2016]. Such an approach requires some humanistic, exploratory and iterative capital of attitudes towards the practice of design and reality [Wszolek, Grech 2016, Brown 2016], which D. Kelley calls figuratively creative confidence [Kelley, Kelley 2015]. To achieve socially recognize goals in a new way, we need processes of change emerging from the creative re-combination of existing assets, including especially human and social capital [Manzini 2014, p. 57]. Designers of social innovation should create new kinds of cultural forms, interpreting the changes in culture [Kimbell 2011, p. 287].

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